

THE ADVANCE OF MODERN DAIRYING



The chemist, the inventor and the practical dairyman have worked hand in hand during the past twenty years to improve and expand the dairy industry. The person who remembers the old-time creamery, and then compares it with the up-to-date creamery of today, realizes how broad and solid is the foundation upon which this industry rests its present handsome proportions.

The writer hauled milk to a creamery when a lad. It had to be delivered twice a day; it had all to be drawn into deep or "shotgun" cans, and set in tanks of cold water to raise the cream, and after twelve to twenty-four hours was taken out and skimmed by hand. Think of the labor involved! Now, the practical physicist supplies the centrifugal cream separator. There is the power separator at the factory, and the hand separator on the farm. We can make a cream of any desired richness to produce the best and richest butter. The combined churn and worker is one of the greatest labor-saving devices that has been introduced into dairying. It enables the butter-maker to control the temperature of his butter during the moulting of it, first by greatly hastening the process, and secondly, by preventing exposure of the butter to the unfavorable temperature, conditions that so commonly exist in many make-rooms, and to which it was exposed on the old-style open worker.

The test is now in constant use with all advanced dairymen. They use it freely as a guide for dividing the proceeds of the factory, for testing the by-products with a view to reducing losses to the minimum, for aiding in the detection of adulterations, and for testing the individual cows in the herd. It furnishes a ready means for determining the per cent of fat in milk and its products and by-products. Before its introduction the farmer had to churn the cream from the milk of each cow to determine her true value for dairy purposes, and the manufacturer of dairy products groped largely in the dark as regarded the milk and cream he handled, and guessed at the losses in by-products. The physicist supplied the lactometer for determining the specific gravity of milk, and this acted as a companion to the test to enable the dairyman to readily determine the solids of milk, and to detect the nature and extent of adulterations. The acidimeter, or "alkali test," is most valuable

in processes of cheese-making and in the ripening of cream for butter-making. Then there is the culture or "starter," to aid in controlling the flavor of milk in cheese-making, the use of the pasteurizer, the "fermentation test," and other aids in expert dairying. The pasteurizer controls the heating of the milk or cream to a sufficiently high temperature to kill practically all the germ life present in it. Afterwards the cream is seeded with desirable forms of germ life, to take control of it, and through their growth and development produce the required flavor in the cream and its product.

All these improvements have led to real and substantial advancement in dairying during recent years, and the industry is constantly reaching a highly scientific basis. We are learning more and more the "reason why" of things, and consequently learning how to do our work better and more intelligently, and how to advance it.

A LITTLE LESSON IN ADVERSITY.

Leon Gambetta, the maker of the last republic of France, the man who deposed Napoleon III., was the son of an almost destitute Italian who had come to Cahors, France.



LEON GAMBETTA.

He was a mere boy when an unfortunate accident occurred which was of such serious consequences that for a time the boy's sight was despaired of. While he was watching a cutter drill the handle of a knife, Gambetta came too near. The fall broke and a piece of it entered the right eye, entirely destroying the sight of it. The left eye was sympathetically affected, and Gambetta was handicapped all through his life by this fear of total blindness.

Despite this he studied to such purpose that he prepared himself to be admitted to the Sorbonne in Paris. His father was opposed to the young man's purpose of becoming a lawyer, and refused to give him any assistance. Gambetta struggled through the direst need at this period, but attained the result he strove for. He had to wait eighteen months for his first brief, but it was not long after that real fame came to him in a day by his defense of Delichuzes, leader of the opposition to the empire.

His bravery in the attack won for him the confidence of the republicans and began for him his splendid career of triumph.

SPAIN'S QUEEN ON OUR STAMPS.

Isabella the First Woman's Face to Appear on American Postage.

Queen Isabella of Spain was the first woman whose portrait was printed on United States postage stamps, says the New York Post. When the postoffice department decided in 1902 to bring out an entire new series, it was suggested that it would be a graceful thing to place the likeness of a woman upon one of the new issue. The idea met with instant approval. The department invited persons interested to send in the names of famous American women eligible for the honor of a place in the gallery of postal issues. As might have been supposed, a number of names of illustrious women were forwarded, but a large plurality favored bestowing the distinction upon Martha Washington, wife of the first President of the United States. It was decided that Martha Washington's likeness should be substituted for that of Gen. Sherman on the 8-cent stamp.

The next question was to discover a suitable portrait of Mrs. Washington and this occasioned no little difficulty. Portraits of this "first lady of the land" appeared to be hard to find—in fact, but one or two pictures were at all suitable, though the entire country was ransacked by stamp collectors and others in the effort to find some new portrait. The stamp is printed in a delicate lavender shade and has been declared to be one of the most artistic the United States has ever issued.

The discussion to place the likeness of Martha Washington upon a postage stamp supplanting one of the great generals of the civil war, was duly exploited. It was declared that to Mrs. Washington would belong the distinction of being the first woman to be so honored, until a collector called attention to the fact that the claim had been pre-empted ten years previously by Queen Isabella. Attention was directed to the \$4 stamp of the Columbian series, issued to commemorate the World's Fair at Chicago in 1893. Upon this stamp appeared the likenesses of Queen Isabella and Christopher Columbus, side by side in ovals, the stamps being twice as large as our current issue.

In addition to the large portrait on the \$4 stamp, Isabella is depicted on the 5-cent denomination, where she sits upon her throne and listens to Columbus as he appeals to her for aid in fitting out his ships. The 8-cent stamp depicts Isabella restoring Columbus to favor; the 10-cent denomination represents Columbus introducing to Ferdinand and Isabella the Indians, who returned with him. Isabella sits upon her throne and bears the official announcement of Columbus of his discovery, according to the scene on the 15-cent stamp, and upon the \$1 denomination is engraved the dramatic scene where the queen offers to pledge her jewels to aid Columbus in his undertaking. The picture on the \$3 stamp shows Columbus describing to Isabella his third voyage to the western hemisphere. Thus it appears that Queen Isabella has been exploited upon seven United States postage stamps.

The stamps of Spain, Cuba, Porto Rico and the Philippines, bearing the likeness to Queen Isabella, II., have always been favorites with collectors, and the Columbian stamps, issued by the United States in 1893, upon which her ancestor is depicted seven times, were perhaps the most popular series of stamps ever issued, although the two-colored Pan-American, or "Buffalo Expedition," stamps pressed them hard

in popular favor. The placing of the large portrait of Isabella upon the \$4 Columbian stamp is the only instance where one government thus honored a person from another country.

ESTABLISHED A PRECEDENT.

First to Have Vermiform Appendix Removed Living in Denver.

Confined in St. Luke's hospital, having recently undergone an operation on one of her fingers, which had become deformed from a break and which was straightened, is Miss Mary H. Gartside, who has the distinction of being the first person on record to have the vermiform appendix removed.

It was because of this operation, which was purely experimental and which was resorted to in the last extreme, that the possibility of removing the appendix was discovered.

Dr. W. W. Grant of this city was the surgeon in charge, says the Denver Times. The case is famous the world over. The Grant home, in Pennsylvania avenue, is one of the places in the city which the megaphone man on the sewing Denver automobile always points out, commenting on the fact that there lives the doctor who performed the first operation for appendicitis and, he was in the habit of adding, the patient died, until one day last summer a tourist when told about the house became much interested, and when the man added that the patient had died arose in her seat and denied the statement in vigorous terms, declaring that it was untrue, as she knew the patient well.

The subject of that first known operation for appendicitis is Miss Gartside, who lives in Minneapolis, and today, at the age of 42, is hale and hearty, with no sign of her former trouble. The case is written up in all medical books, and the knowledge that Miss Gartside is again in Denver is a matter of interest in the medical world, and she has been the subject of much attention from the physicians in the city.

A history of the case is found in the Colorado Medicine. The article is prefaced by a note that states that investigations show that this case antedates all others by more than two years. When the operation was performed in January, 1885, there was no antecedent or contemporary history of such a case, and Dr. Grant, after studying the case, decided that it would be possible to remove the appendix, and without the scratch of a pen to guide him opened the abdomen and removed the appendix. The operation was performed at the Gartside home, in Davenport, Iowa.

ELEPHANTS GOING UP.

Quoted at \$250 a Vertical Foot, Instead of \$240 Two Years Ago.

"A 5-foot elephant costs this spring," said the animal expert, "\$1,400, as against \$1,200, for which such elephants could be bought two years ago. "Elephants, like all other wild animals, are growing scarcer with the settlement of the globe, and their prices tend upward. More small elephants than big ones are imported because they cost less to begin with and because they are easier and safer to transport, and showmen like them, too, because the young elephants are more tractable and easier to train. And small elephants are attractive anyway. "Then the elephant is a hardy animal in captivity, and it is naturally long-lived, and the young elephant increases in value with its growth; and so, with their prices tending upward, young elephants are good property."

Women Who Wear Explosive Gowns "Science, which lately furnished a mechanical substitute for the horse, has now set about putting the lowly silkworm out of business," writes Clarence Hutton in Technical World Magazine.

Almost unknown in the United States, the manufacture of artificial silk has been on a commercial basis in France for several years, the daily production being now about seven tons.

In forming a chemical compound corresponding to the viscous fluid out of which the silkworm spins his delicate thread, the French chemists found, strangely enough, that the best substitute was a solution of gun-cotton, which also serves as the basis for the most powerful and deadly of modern explosives. To what extent this gun-cotton silk is relieved of its explosive qualities before being woven into laces and dress fabrics, seems to be somewhat questionable. Certainly a young woman gowned in gun-cotton and wearing a dainty nitro glycerine wrap about her white shoulders, would be a most formidable, not to say dangerous, object. If the new fabric ever becomes popular in this country it will plainly be necessary to warn young men not to approach its wearers with lighted cigarettes or other combustibles in their hands. And sparking will become a most hazardous occupation.

Uncle Joe as Umpire.

Uncle Joe Cannon and about half the members of the House went down the river to a planked-shad party given by the local Board of Trade, says a Washington letter to the St. Louis Post-Dispatch. They organized a ball game and put Uncle Joe in as umpire. He was spry as a cat and made some marvelous decisions. His star performance was when Gen. George Harries, having made a home run, started round the bases a second time. "You're out!" shouted Uncle Joe. "Why?" demanded Harries. "I am entitled to run until they find the ball." "Not at all," the umpire said firmly. "Your time has expired."

Every farmer has dreams that some day the spring on his farm will attract summer visitors.

MOST BEAUTIFUL PUBLIC BUILDING IN AMERICA

Congressional Library at Washington Famous for Its Magnificent Decorations



So many celebrities were concerned in the planning, erection and adornment of the Congressional Library, that a list of them would embrace about all the great ones in the world of art and architecture. With due regard to a very few structures which cost more, the library is ranked as the most beautiful public building in America, and one of the most magnificent in the world. From first to last, it had the most assiduous care of its projectors, and constant watchfulness made graft—that practice of diverting the public money to private ends so noticeable in some other undertakings of similar character—impossible; so that the money appropriated went to exactly the uses intended. There are other buildings of more general importance in Washington. The Capitol, of course, ranks first, and the Treasury and State, War and Navy buildings follow closely; but however it is exceeded in such affairs as pertain to the business of the government, even the Capitol cannot approach the library in interior beauty.

The Congressional Library represents an outlay of \$7,000,000. It covers an area of three and one-half acres, or about the same as the ground area of the Capitol. It is 470x340 feet in dimensions and has four large inner courts averaging 150x100 feet. The library is situated squarely in front of the Capitol, and is separated from it by beautiful lawns and driveways. It covers the site of seventy residences which were bought in the late '80's at a cost of about \$600,000. The foundations were begun in 1880, and the building was completed in 1897. The structure is of the Italian Renaissance order of architecture, has three stories and a dome. The latter is finished in black copper, with panels covered with a thick coating of gold leaf. The burning torch of Science, with which the dome is capped, reaches a height of 110 feet above ground. The only jarring note in the whole structure is caused by the low elevation of the porch, as compared with the towering 307 feet of the statue of Armed Freedom on the dome of the Capitol just across the way. One is likely to call the library "squat" when comparing the two buildings, but this feeling is lost immediately on entrance to the wonders of the main stair hall.

The lofty ceiling is arched and groined so gracefully and artistically and the general effect is so harmonious, that the visitor almost invariably loses sight of the magnitude of the ornamentation in admiration of the apartment as a whole; that is at first.

Seated on one of the numerous settees, but a short time ensues ere color and decorative schemes begin to formulate, and then the full magnificence of the majestic hall bursts upon one with dazzling effect. It is possible that in the wonderful structures of India—the Taj Mahal, for example—there are rooms more beautiful. How they could be so, however, the imagination cannot conceive.

The columns, and stairways, and balustrades, and arches, are all made of the purest of white marble, highly polished.

ished and inlaid with stones in myriad colorings. At the sides rise lofty rounded columns with elegantly carved Corinthian capitals and the arches are picked out in marble rosettes, palm leaves and foliated designs of the most exquisite finish. The skylight is seventy-two feet above the floor.

There could be nothing richer or more magnificent than the stairways, with their festoons of fruits and flowers and the turnposts surmounted by two great bronze figures bearing standards for electric lights. The staircases are also ornamented with twenty-six marble figures by Martiny, representing the arts and sciences and carved in bold relief. A master of language has described this stair hall as a poem in polished stone, and it is by all odds the finest marble interior in America.

The Congressional Library had its inception in 1800, when Congress appropriated \$5,000 for it. From that small beginning, the library has grown until it now contains more than a million books. Every copyrighted work is represented, the law requiring the deposit of two copies of each publication copyrighted. A number of special, priceless collections are here, including Thomas Jefferson's library, the Smithsonian library and ancient, priceless engravings almost without limit. Any person may use the library, but only members of Congress, the President, Supreme Court, and government officials may draw books out of it.

The book stacks are of iron and rise in tiers nine stories to the roof. Each stack has a capacity of 800,000 volumes. There are about forty-four running miles of shelving, and the capacity of the library when all available space is taken up is estimated at 4,500,000 volumes. When books are wanted at the Capitol, they are taken through a tunnel by means of an endless chain mechanism. The exterior of the library is somewhat plain, in contrast to the interior.

The visitor to Washington who does not give the library all the time possible misses much. It is the only public building in the city which is open to visitors after nightfall, and its decorations appear more charming if possible under electric light than in daylight. The hours are 9 a. m. to 10 p. m. and so numerous are the visitors that the attendants are usually busy from opening to closing time.—Williamsport (Pa.) Grit.

LONDON'S HUMOR AND FUN.

Cockneys Bubble Over with the Light Things of Speech.

Mention has been made of the gay and careless nature of the Parisian. Has any one except a true-born Londoner ever observed the humor and fun which lie in great masses among the people of London? W. W. Jacobs in his modern days has depicted some of this in special particulars. Dickens, above all writers, most faithfully portrayed all phases of it. Thackeray has dealt with it in a manner not likely to be repeated.

But all three authors do not collectively make up the mass of London humor. It is everywhere. It peeps out

with drivers of public vehicles who use their horses as friends from whom to draw inspiration for their sallies of humor, and one wonders what will become of all this when the horseless vehicle is the universal mode of vehicular traction. Surely the man who turns a handle is not the same as the man who holds the reins and can not get out of electricity and petroleum what has been got out of the pulsations of horses.

It comes to us from the railway porters and servants who keep at bay the troublesome multitude by deftly turning into broad farce events which begin seriously. It comes, too, from hotel and restaurant waiters, who see enough of the grim humors of life to become an almost endless source of inspiration. But it is also apparent on

the surface. Butcher boy and baker boy and shop boy are full of it. They carry their goods along in happy ignorance of the sport they give to those who can note the humorous in life. And the costermonger and itinerant dealer, to be met with almost everywhere, are special products of London who can not fail to attract.

One does not quite meet the counterparts of these people in Paris. Those who take their place are not so distinctive and partake more of the characteristics of the average Parisian. They send out, therefore, to the observer only what the average Parisian sends out, and do not stand apart as types of what the city can do in the way of carrying on the humors of the time. Some day, perhaps, there will arise a greater humorist in London who will penetrate what London produces in this respect, and when this shall happen London will appear a happier and more genial place than is commonly supposed.—Cornhill Magazine.

An Impression.

"Do you like Chaucer?" asked the bookish young man.

"I have only glanced through his works," answered Mrs. Cumrox. "He was one of the original spelling reformers, wasn't he?"—Washington Star.

These people with a great deal of assurance are quite often right, much as we dislike them.

THE JOHNSTOWN FLOOD.



It is now seventeen years since the great Johnstown flood occurred, a disaster that will never be forgotten in history on account of its rapidity, its horrors and the great loss of life.

Johnstown lies in a narrow valley at the foot of the Allegheny Mountains, between Conemaugh River and Stony Creek, with a precipitous hill on one side and a gentle slope on the other. In 1889 it had a population of 30,000 souls, and was the busy, thriving principal point between Philadelphia and Pittsburg. For a week previous to the tragic day of the downfall there had been heavy rains, and the mountain streams were muddy and full. The whole face of nature back of the town presented a change to its usual aspect, and May 31 the waters bulged where South Fork Lake and the dam connected, and, tearing away the stone coping, gave the first token of danger. Three horsemen started wildly down the valley to arouse the people and tell them of impending peril. Half a dozen houses were swept away, and then the flood burst upon Johnstown. Hotels, gas and water plants, banks, residences, were all swallowed up by the devastating flood. In one borough, out of 600 houses only 186 were left standing.

The loss in money value was many millions; the loss of life over 2,000. When the flood was past, a terrible chaos of wreckage dotted the valley to its furthest extent. Charity and enterprise, however, soon evolved the beginning of a risen city from the old, and on Monday, June 3, 1890, Johnstown began its first new building.